BRONZE 500 AF PFAS FREE V2

Version Number 1.0 Revision Date 08/30/2023



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SAFETY DATA SHEET

BRONZE 500 AF PFAS FREE V2

Section 1. Identification		
GHS product identifier	:	BRONZE 500 AF PFAS FREE V2
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	CC10382989
Product type	:	solid
Relevant identified uses of the subs	tance	or mixture and uses advised against
Product use	:	Industrial applications. Plastics.
Supplier's details	:	AVIENT CORPORATION
		33587 Walker Road, Avon Lake, OH 44012
		1 (440) 930-1000 or 1 (844) 4AVIENT
Emergency telephone number	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or
(with hours of operation)		accident).

Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status	:	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	:	Not classified.
GHS label elements		
Signal word Hazard statements	:	No signal word. No known significant effects or critical hazards.

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Precautionary statements

	:	Not applicable.
Prevention	:	Not applicable.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Supplemental label elements	:	None known.
Hazards not otherwise classified	:	None known.
		Not available.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10382989

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	>= 0.3 - <= 1	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

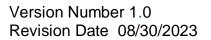
Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable
	for breathing. Get medical attention if symptoms occur.
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated
	clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. If material has been swallowed and the
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Potential acute health effects



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exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

i otential acate nearth eneets		
Eye contact Inhalation Skin contact Ingestion	:	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Over-exposure signs/symptoms		
Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.
Indication of immediate medical	l attentio	n and special treatment needed, if necessary
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or $\rm CO_2$. None known.
Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	If overheated or burnt, the polymer releases formaldehyde. Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

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Special protective actions for fire- fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self- contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel For emergency responders	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment	nt ar	id cleaning up
Small spill	:	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational	:	Eating, drinking and smoking should be prohibited in areas where this
hygiene		material is handled, stored and processed. Workers should wash hands
		and face before eating, drinking and smoking. Remove contaminated
		clothing and protective equipment before entering eating areas. See

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also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

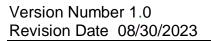
Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name		Exposure limits
Titanium dioxide		OSHA PEL 1989 (1989-03-01) TWA 10 mg/m3 Form: Total dust OSHA PEL (1993-06-30) TWA 15 mg/m3 Form: Total dust ACGIH TLV (2022-01-06) TWA 0.2 mg/m3 Form: respirable fraction, nanoscale particles TWA 2.5 mg/m3 Form: respirable fraction, finescale particles
Appropriate engineering controls	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection measures		
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to
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	liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state Color	:	solid [Pellets.] BROWN
Odor		Not available.
Odor threshold	:	Not available.
		Not available.
pH	:	
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not applicable.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive	:	Lower: Not applicable.
(flammable) limits		Upper: Not applicable.
Vapor pressure	:	Not available.
Vapor density	:	Not applicable.
Relative density	:	Not available.

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Solubility	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n- octanol/water	:	Not applicable.
Auto-ignition temperature	:	Not applicable.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Not available.
·		Kinematic: Not applicable.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Maintain polymer temperature below 230°C (446°F). Avoid prolonged exposure at or above recommended processing temperature.
Incompatible materials	:	Incompatible with strong oxidizers and with strong acids and bases (decomposes to form formaldehyde). At melt temperatures, acetal resins are incompatible with halogenated polymers such as vinyl (PVC) and any elastomers containing any halogenated polymers. At processing conditions, these materials are mutually destructive and involve rapid degradation. Even small amounts of such contaminants can cause sudden and spontaneous formaldehyde gas formation. Workplace fume well above threshold levels are a likely result. Unsafe pressurization of equipment such as extruder or mold can also result. Thoroughly purge and mechanically clean processing equipment to avoid even trace quantities of halogenated materials from coming in contact with the acetal. Prevent contamination of virgin or rework resin.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure

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Titanium oxide (TiO2)				
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	Dusts and mists	ļ		
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Conclusion/Summary	: Mixtur	e.Not fully test	ed.No results available.	
Irritation/Corrosion				
Conclusion/Summary Skin Eyes Respiratory		re.Not fully tes re.Not fully tes re.		
<u>Sensitization</u>				
Conclusion/Summary Skin Respiratory		re.Not fully tes re.Not fully tes		
Mutagenicity				
Conclusion/Summary	: Mixtur	re.Not fully tes	ted.	
Carcinogenicity				
Conclusion/Summary	: Mixtu	re.Not fully tes	ted.	
<u>Classification</u>				
Product/ingredient name			NTP	
Titanium oxide (TiO2)	- 2B		-	
<u>Reproductive toxicity</u> Conclusion/Summary	: Mixtu	re.Not fully tes	ted.	
Teratogenicity				
Conclusion/Summary	: Mixtu	re.Not fully tes	ted.	
Specific target organ toxicity Not available.	(single exposure)			
Specific target organ toxicity Not available.	(repeated exposure	<u>e)</u>		

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Aspiration hazard Not available.		
Information on the likely routes of exposure	:	Not available.
Potential acute health effects		
Eye contact	:	No known significant effects or critical hazards.
	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the physical, che	mi	cal and toxicological characteristics
<u> </u>		
Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.
Delayed and immediate effects and also	50 (chronic effects from short and long term exposure
Denayed and miniculate effects and an	<u>50 C</u>	mome enects nom short and long term exposure
<u>Short term exposure</u>		
Potential immediate effects		Not available.
	:	Not available.
i otentiar delayed effects	•	
Long term exposure		
Potential immediate effects	:	Not available.
	:	Not available.
-		
Potential chronic health effects		
Conclusion/Summary	:	Mixture.Not fully tested.No results available.
General	:	No known significant effects or critical hazards.
	:	No known significant effects or critical hazards.
	:	No known significant effects or critical hazards.
	:	Not available.
Dovolonmontal offacts		Not available

Numerical measures of toxicity

Acute	toxicity	estimates
N/A		

Developmental effects

Fertility effects

No known significant effects or critical hazards.

Not available.

:

:

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Other information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Section 12. Ecological information

:

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium oxide (TiO2)			
	Acute LC50 > 1,000 Mg/l Marine water	Fish - Fundulus heteroclitus	96 h
	Acute LC50 3 Mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 h
	Acute LC50 6.5 Mg/l Fresh water	Daphnia - Daphnia pulex	48 h
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Remarks - Acute - Aquatic invertebrates.:	Chemicals are not readily availab	le as they are bound within the po	lymer matrix.
Conclusion/Summary	: Chemicals are not read polymer matrix.	dily available as they are bound with	ithin the
Persistence and degradability			
Conclusion/Summary	: Chemicals are not rea polymer matrix.	dily available as they are bound w	vithin the
Conclusion/Summary	: Chemicals are not rea polymer matrix.	dily available as they are bound w	vithin the
Bioaccumulative potential Not available.			
<u>Mobility in soil</u>			
Soil/water partition coefficien (KOC)	nt : Not available.		

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Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

:

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed

Section 14. Transport information

U.S.DOT 49CFR Ground/Air/Water	: Not regulated for transportation.
International Air ICAO/IATA	: Consult mode specific transport rules
International Water IMO/IMDG	: Consult mode specific transport rules

Section 15. Regulatory information

United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not listed	U.S. Federal regulations	United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not
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		United States - TSCA 5(a)2 - Proposed significant new use rule Not listed United States - TSCA 5(e) - Substances consent order: Not list United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): determined United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed Dodecamethylcyclohexasiloxane	
		United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Not listed United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Not listed United States - Department of commerce - Precursor chemical: Not listed	
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) Clean Air Act Section 602 Class I	:	Listed Not listed	
Substances Clean Air Act Section 602 Class II Substances	:	Not listed	
DEA List I Chemicals (Precursor Chemicals) DEA List II Chemicals (Essential	:	Not listed	
Chemicals)			

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

: Not applicable.

Composition/information on ingredients

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No products were found.		
Name	%	Classification
Titanium oxide (TiO2)	>= 0.3 - <= 1	CARCINOGENICITY - Category 2

Not applicable.

State regulations		
Massachusetts	:	The following components are listed:
		Mica Iron oxide
New York	:	None of the components are listed.
New Jersey	:	The following components are listed: Mica
		Iron oxide
Pennsylvania	:	The following components are listed:
		Mica
		Iron oxide

California Prop. 65

WARNING: This product can expose you to Titanium dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	-	-

United States inventory (TSCA 8b)	:	All components are active or exempted.
Canada inventory	:	All components are listed or exempted.
International regulations Inventory list		
Australia	:	Not determined.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Eurasian Economic Union	:	Russian Federation inventory: Not determined.
Japan	:	Japan inventory (CSCL): Not determined.
-		Japan inventory (ISHL): Not determined.
New Zealand	:	Not determined.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
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Taiwan	:	Not determined.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	All components are active or exempted.
Viet Nam	:	Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual. History

<u>History</u>		
Date of printing	:	08/31/2023
Date of issue/Date of revision	:	08/30/2023
Date of previous issue	:	00/00/0000
Version	:	1.0
Key to abbreviations	:	ATE = Acute Toxicity Estimate
•		BCF = Bioconcentration Factor
		GHS = Globally Harmonized System of Classification and Labelling of
		Chemicals
		IATA = International Air Transport Association
		IBC = Intermediate Bulk Container
		IMDG = International Maritime Dangerous Goods
		LogPow = logarithm of the octanol/water partition coefficient
		MARPOL = International Convention for the Prevention of Pollution From
		Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine
		pollution)
		$\hat{U}N = United Nations$
References	:	Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

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Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.

